A Personal Organizer: PocketDiary

(a module)

Abstract
Sometimes, a cheap personal organizer on paper can come in handy. This solution prepared in ConTeXt MKIV provides a range of options to set up such a personal organizer. The point is, that the PocketDiary is printed on a single sided A4 landscape sheet of paper and then folded into a pocket size booklet hereby preventing that unprinted/empty pages are seen. The PocketDiary is easy to make and after 1 week it is simply replaced with a subsequent booklet. A detailed description is given of the system and how to set up a production file. At the end of the article instructions are included how to fold the booklet.

Keywords
Maps, Context, module, lua

Introduction
Some time ago my brother Heinz asked me to prepare him a special page-arrangement scheme. This scheme is suitable to form a section with a single-sided printed sheet of paper. He wanted to use it for a special kind of greeting-cards. By coincidence I detected an article by U. Ziegenhagen in de TEXnische Komödie nr. 3/2010 [4]. This article deals with the preparation of a PocketMod, which is a personal organizer based on the aforementioned arranging scheme. PocketMod is available as an online version on http://www.pocketmod.com. – After reading the article and visiting the web-site I got intrigued by the fact that ConTEXt has built-in arranging capabilities and due to the LuaTEX engine it should be possible to build such a personal organizer in ConTEXt.

The result is a module which can generate such personal organizers, called PocketDiary. I give a description of the possibilities in this article.

General Description
The PocketDiary is a personal organizer. It is like a section of a book, but very small in size. The PocketDiary is based on the idea, that it should be possible to repeatedly produce such a personal organizer during the year by altering a minimal number of variables. The diary is based on a week number and, of course, the year. – Although this is enough information for preparing a week-diary, it is not enough if you want more options such as inclusion of month-tables, a year-table, inclusion of personal data etc. To start up the PocketDiary production more information needs to be given to the system.

PocketDiary Layout
The code presented hereunder is all you need to put into your personal PocketDiary file to be able to produce a personal organizer.

First we program ConTEXt to load the module \texttt{t-pocketdiary}
\usemodule[pocketdiary]

Without stating the font to be used PocketDiary uses Latin Modern. If you have your own favourite font set it up here:
PocketDiary has a multiple-language interface, so we need to tell it which language we use. Therefore the document should start with the definition of the main language used. Supported interfaces are English, Dutch, German, Italian and French.

The module automatically sets the layout of the PocketDiary page. The PocketDiary’s page design is based on a header and footer line and with the calendar information in the main text area. The header line will contain main information on the calendar-issue at hand i.e. Day of the month – Day name (short) – Week number – Year.

Everything which is configurable, is brought together in 5 sets of variables. In order to be able to calculate the desired calendars, the following variables of PocketDiary should be set:

```
setvariables
  [PocketDiary]
  [Year=2011,
   Week=17,
   Day=7,
   Month=5,
   Nextyear=yes]
```

The variables in the set ‘PocketDiary’ are explained in the following table. Be aware, that some of the variables change the behaviour of the PocketDiary.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>number</td>
<td>Year numbers in the range 1900 and 4099. The lower limit is computer dependent (OS-timestamp), the upper limit is dependent on the Easter Sunday calculation.</td>
</tr>
<tr>
<td>Week</td>
<td>number</td>
<td>Values between 1 and 53.</td>
</tr>
<tr>
<td>Day</td>
<td>number</td>
<td>Values between 1 and 7. If this variable contains a value, then the PocketDiary will be made up according to the variable specifications given in the ‘PocketDiaryLayout’ section. If this variable is empty, then a PocketDiary with one page per day is made up. The content of pages 1 and 8 can be chosen freely in the section ‘PocketDiaryLayout’.</td>
</tr>
<tr>
<td>Month</td>
<td>number</td>
<td>Values between 1 and 12. This variable is independent from the variables ‘Year’ and ‘Week’. It indicates only which month should be calculated for a month table.</td>
</tr>
<tr>
<td>Nextyear</td>
<td>yes/no</td>
<td>The testing is done on ‘yes’. If set to ‘yes’ the next year instead of the current year is used for the calculation of the year calendar. This can be practical when current year is nearly over.</td>
</tr>
</tbody>
</table>

The PocketDiary holds 8 (Page1 to Page8) pages. It is possible to give the organizer an individual layout according to your own wishes. It is no problem to place several pages with the same template name.

```
setvariables
  [PocketDiaryLayout]
```
Variable | Comment
---|---
Day | The weekday, indicated in the variable ‘Day’ in the previous section, is used to make a PocketDiary page.
Week | A week calendar, based on the variable ‘Week’ in the previous section, is used for the presentation of a week table.
Monthcurrent | A month table based on the value in the variable ‘Month’ of the previous section, is typeset.
Monthnext | A month table of the next month based on the value in the variable ‘Month’ of the previous section is typeset.
Yearcalendar | A complete year calendar is typeset. If the ‘Nextyear’ variable is not ‘yes’, the year calendar for the year indicated in variable ‘Year’ of the previous section is used. Otherwise that variable is increased by 1 to typeset the year calendar of the following year.
Lost-Return | By means of the set values in the section ‘PocketDiaryAddress’ a lost-and-return page is composed.
Blank | This page carries a header and a footer but is otherwise empty.
Todo | A todo-list template is typeset.
Caro | A page with full-grid-paper is typeset.
Lines | A page with grid lines is typeset.
Contact | A form with two sets of preprinted fields for marking down contact information is typeset.

The third block of variables contains information used for the footer and the lost-return form.

```
\setvariables
  [PocketDiaryAddress]
  [Familyname=Egger, Forename=Willi, Street=Townstreet 3B, Zipcode=5000, City=New CONTEXT, Country=TEX world, Phone= 22 444 55 88 66, Mobile= 22 6 19 19 1717, E-mail=info at pocketdiary.org, Web=www.pocketdiary.org]
```

The footer line contains three fields which can be customized with the ‘PocketDiaryFooter’ variables.

```
\setvariables
  [PocketDiaryFooter]
  [Lefttext=PocketDiary, Centertext=\pagenumber,
The main text is separated from the header and footer with a line. This line can be given a custom color. The standard color is blue. For those who wish grid lines in another color than light-gray, they can give ‘Gridline’ another value.

\setvariables
  [PocketDiaryColors]
  [Separatorline=blue, Gridline=[s=.75]]

The last block of code states:

\starttext
  \setups
    {PocketDiary}
  \stopext

The result: Day-Calendar with a Year Calendar
The result: Week Calendar with Two Custom Pages

Available templates

Day. The day calendar is shown in figure 1.

The weekend calendar shows Saturday and Sunday on one page (see figure 2)

Week Calendar. The week calendar looks as shown in the example figure 3.

Month Calendar. The month calendar is shown in figure 4.

Year Calendar. An example of the current year calendar you can find in figure 5.

Templates Unrelated to Calendar Calculations. The PocketDiary comes with a couple of templates for writing down information. They are shown in figure 6.
The Lua Part
First I thought that it would not be that hard to build a calendar for this kind of personal organizer. It is fairly easy, if you expect just a basic organizer without fancy bells and whistles. However one should not be scared to type again and again a lot of information in order to get the desired output. – So, when I started this, I wanted to
get a production file, which would be easy to maintain and there should not be too
many changes during repeated cycles of making such a personal organizer. This im-
plies however, that the background machinery must be able to calculate everything
based on a year, week number, month and a day number. – Soon I detected that there
are more and less difficult areas in the year’s calendar. The easier things comprise
leap-year calculations and calculations which do not involve january and december.
The beginning of the year and the end of the year are quite tricky moments. Think
e.g. whether the last days of december are in week 52 or 53 and whether the first
days of the next year belong to week 52, 53 or are representing the first week of the
new year.

The decision has been made, that this module would use the European standard
for date calculations. The Gregorian calendar is used exclusively. The module is
based on the ISO-8061 standard, which defines that the first week of a year is the
week having the year’s first Thursday in it. Furthermore it states that the week
starts on Monday which is different from what Lua does, where day 1 is Sunday.
The os-library coming with lua can do a lot for date calculations. So, where possible
this library is used.

Googling helps a lot to gain insight in the date-calculations. The work of So-
hael Babwani [5] is an interesting source. I wanted the PocketDiary to indicate also
the main Christian feast days. I found the web-site of Ron Mallen [6], which was a
big help. He developed an Easter Sunday calculation based on three tables. He also
presents a BASIC programme on his web-site which calculates the date automatic-
ally. This programme is then transcribed into Lua.

There are more questions to be answered e.g. how to calculate a week number
from a certain date. Thanks to Ferry van Schaik [7] I got a Java snippet, which I have
converted to Lua.

**How to Fold the PocketDiary**
The eight printed pages are folded in such a way that the PocketDiary presents itself
as a small booklet. There are no empty pages visible.

![Figure 7. The basic folding scheme](#)
the center in order to get a form similar to figure 8. Then fold the upper double-page in direction B, the lower double-page in direction C and finally the lefthand double-sided page in direction D.

![Figure 8. The basic folding scheme](image-url)

Before creasing the booklet at the spine it is worthwhile to put the section down on the table and adjust folds where needed. Finally the spine is creased preferably with a bone-folder.

**The Module**

The module is available on the ConTeXt wiki and it can be downloaded from http://modules.contextgarden.net/.

**References**

7. How can I calculate the week number of the current date?. Ferry van Schaik. 2001. From:http://www.irt.org/script/914.htm

**Thanks**

I would like to thank Hans Hagen, Taco Hoekwater and Hartmut Henkel for the great LATEX machinery and Wolfgang Schuster for supporting me in tackling the multi-lingual interface. Silvan, thank you for proofreading this text.

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